

# Freshwater Safe to Swim Survey

## August 27<sup>th</sup> 2013

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# Overview of today's presentation

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1. Purpose of Study
2. Presentation of Survey Questions and Data
3. Confusing Issues in survey responses
4. Discussion within working group on how to interpret and apply survey results



# Mission

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Conduct research to improve the functionality of the My Water Quality “Safe to Swim” Portal for fresh water.



# Overall Purpose of Survey

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- ▶ To identify those:

- ▶ In need of information on freshwater “safe to swim” water quality
- ▶ In need of assistance with freshwater “safe to swim” water quality monitoring programs
- ▶ Who are generating freshwater “safe to swim” water quality data and data-sharing
- ▶ Who are informing the public about freshwater “safe to swim” water quality



# Overall Purpose

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- ▶ To identify those in need of information on freshwater “safe to swim” water quality
  - ▶ Concerns?
  - ▶ Add basic information to the Safe to Swim web portal
  - ▶ What drives monitoring?



# Overall Purpose

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- ▶ To identify those in need of assistance with freshwater “safe to swim” water quality monitoring programs
  - ▶ Who is not monitoring and how can we fill these gaps?
  - ▶ Facilitating collaborations with organizations to help them monitor
  - ▶ Standardize freshwater quality monitoring?
  - ▶ Assistance with parameter selection and methods
  - ▶ Providing data interpretation tools and informatics



# Overall Purpose

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- ▶ To identify those who are generating freshwater quality data
  - ▶ What organizations are collecting this data?
  - ▶ Who is using this data?
  - ▶ How is this data being shared?



# Overall Purpose

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- ▶ To identify those who are informing the public about freshwater “safe to swim” water quality
  - ▶ What programs are conducting public outreach?
  - ▶ How are they reaching out to the public?
  - ▶ Capture websites through which to network via the My Water Quality portal.



# Project Summary

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- ▶ Survey generated and implemented online
  - ▶ Conducted pre- and post- survey sub-working group meetings
- ▶ Survey Period
  - ▶ July 26<sup>th</sup>, 2013 – Aug 19<sup>th</sup>, 2013
  - ▶ Survey Population (who was invited)
    - SWRCB and CWQMC listservs
      - Safe to Swim
      - CWQMCN
      - Citizen Monitoring
    - Groups identified within the 2008 SWAMP study
    - Other agencies
      - Tribal
      - National Park Service
      - County Public Health Officers
    - Invited survey participants were allowed to forward invitation to survey to others
- ▶ 53 useable survey responses
  - ▶ 74 attempted
    - ▶ 3 blank
    - ▶ 6 incomplete/partial responses
    - ▶ 11 participant's responses deemed irrelevant to goals of survey
      - Only did ambient water quality monitoring and no “safe to swim” outreach
      - Discussed beneficial uses of marine waters



# Problems encountered with potential survey participant contact information

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- ▶ 2008 study Bacteria Monitoring Inventory of California's Freshwater Beaches

[www.waterboards.ca.gov/water\\_issues/programs/swamp/bacteria\\_monitoring.shtml](http://www.waterboards.ca.gov/water_issues/programs/swamp/bacteria_monitoring.shtml)

- ▶ Lack of up to date contact information
- ▶ Inability to determine contact information of those putting data into CEDEN
- ▶ Difficulty in sorting between freshwater and marine FIB data
- ▶ Difficulty in finding program information online
  - ▶ eg. National Parks...



# Presentation of Survey Questions and Data

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**QUESTIONNAIRE**

Very often	<input type="checkbox"/>
Often	<input type="checkbox"/>
Sometimes	<input type="checkbox"/>
Rarely	<input checked="" type="checkbox"/>
	<input type="checkbox"/>

# Questions 1-5

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- ▶ Who is/isn't generating freshwater "safe to swim" water quality data
- ▶ Whose freshwater "safe to swim" water quality monitoring programs can we help?



# Question 1 – General Information

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Region	# of Participants
North Coast	9
SF	2
Central Coast	10
LA	4
Central Valley	7
Lahontan	6
Colorado	1
Santa Ana	2
San Diego	2
Statewide	7



## Question 2 - Type of Organization? (Please Select Best Fit)

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Answer	# of Responses	Response Ratio (%)
City	5	9.4
County	17	32.0
Water Purveyor	2	3.7
Joint Powers Authority	1	1.8
State	14	26.4
Federal	2	3.7
Tribal	3	5.6
Non-Gov Org	9	16.9
Total	53	100



# Question 3 - Does your organization have a water quality monitoring program?

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Answer	# of Responses	Response Ratio (%)
Yes	46	86.7
No	7	13.2
Total	53	100



# Question 4 - Names of your monitoring programs if you have any?

Answer	
1	Monitoring is required in our Santa Ana River and Santa Margarita River MS4 permits
2	San Diego RiverWatch
3	Bass Lake
4	Water Quality Monitoring: GAP, 106, 319
	Bay Delta Monitoring and Analysis a.k.a.
5	IEP Environmental Monitoring Program
6	Not our organization, but I've been monitoring San Joaquin River water quality (including FIBs) for a few years.
7	Central coast Ambient Monitoring Program (CCAMP)
	Willits Bypass Monitoring and Reporting Program, Order RI-2010-0066
8	Clear Lake Nutrient TMDL
	NPDES Program for Aquatic Herbicide Applications
9	Member of the San Joaquin County & Delta Water Quality Coalition, Irrigated lands Program
10	CDFW has several; I deal with spills
	Recreational water monitoring for fresh water lakes/reservoirs beaches (Del Valle, Shadow Cliffs, Quarry Lakes, Lake Temescal and Tilden/Anza)
11	Recreational water monitoring for San Francisco Bay Beaches (Crown, Encinal & Keller Beaches)
	Ocean Water Beach Monitoring
12	Recreational Freshwater Beach Monitoring (Spring Lake and Russian River)



# Question 4 - Names of your monitoring programs if you have any?

<b>Answer</b>	
<b>13</b>	Klamath Basin water quality monitoring program (IM 15)
<b>14</b>	Environmental Health Services
<b>15</b>	Beach Water Monitoring, Fresh Water Swimming Area monitoring.
<b>16</b>	Operators under permit are required to collect weekly water samples at lakes with designated swim areas for testing. Lab results are submitted to our department.
<b>17</b>	Surface Water Ambient Monitoring Program
<b>18</b>	<ul style="list-style-type: none"> <li>-Water and Environmental Monitoring Program</li> <li>-NorCal Water Monitoring Program</li> <li>-Sacramento River Watershed Coordinated Monitoring Program (contract with SWRCB (SWAMP/SPOT)</li> <li>-Oroville FERC Relicensing</li> </ul>
<b>19</b>	State Water Project water quality monitoring program
<b>20</b>	Stream Team
<b>21</b>	Santa Ana River ENCORE
	SWAMP
<b>22</b>	In-house laboratory: 303d pathogen listing / delisting analysis and special projects
<b>23</b>	<ul style="list-style-type: none"> <li>-NAWQA</li> <li>-GAMA</li> <li>-NASQAN</li> <li>-Hydrologic Benchmark</li> <li>-Various sites throughout CA</li> </ul>
	MRSWMP ASBS Water Quality Monitoring Program - Dry Flush, First Flush, Second Flush, Etc.
<b>24</b>	Central Coast ASBS Regional Monitoring Program
<b>25</b>	Ocean Water Monitoring Program
<b>26</b>	Malibu Creek Total Maximum Daily Load (TMDL) Compliance Monitoring Program

# Question 4 - Names of your monitoring programs if you have any?

Answer	
27	-San Gabriel River Regional Monitoring Program -Los Angeles River watershed Monitoring Program
28	Bishop Paiute Tribe Water Quality Control Program
29	SWAMP,TMDL
30	Small Water Systems, River Rafting
31	NPDES stormwater sampling
32	Ventura Countywide Stormwater Quality Management Program
33	-SWRCB Nutrient TMDL -CA DWR monthly monitoring -Irrigated Lands Regulatory Program -Clear Lake Aquatic Plant Management NPDES -Visual monitoring for HAB scum -Cyanotoxin monitoring when necessary
34	CCLEAN: "Central Coast Long-term Environmental Assessment Network" (member) WWTP Effluent, Receiving Water: Monterey Bay  LTMS: Long Term Monitoring Stations (Source Control/ Stormwater/baseline monitoring): Pajaro River, Salsipuedes Creek, Watsonville Slough, Pinto Lake
35	BioSITE (Students Investigating Their Environment)
36	Water Program; consists of one Water Technician and the Environmental Director
37	Regional Surface Water Ambient Monitoring Program. Various TMDL related monitoring projects.
38	Drinking Water, Storm Water, Waste Water, Engineered Wetlands
39	Southern California Coastal Ocean Observing System- Pier based Harmful Algal Bloom Monitoring Program. SCCOOS also disseminates data and information on CA ASBS and other monitoring efforts within the state but replies to this questionnaire will be focused on HAB program.

## Question 5 – How often do you monitor, if you have a monitoring program? (check all that apply)

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Answer	# of Responses	Response Ratio (%)
Daily	10	22.2
Weekly	22	48.8
Monthly	20	44.4
Quarterly	13	28.8
Once Annually	9	20.0
Seasonally	18	40.0
Episodically	17	37.7
Other	6	13.3
Total Responses	45	100



## Question 5 – How often do you monitor, if you have a monitoring program? Answer: “Other”

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	Other
1	Conducted by County Flood Control District
2	three times during late spring and summer
3	twice a month from Nov-March
4	multiple continuous data loggers
5	Continuously (30 minute intervals at 4 dedicated stations)
6	Twice a year (CCLEAN)



## Questions 6-8

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- ▶ How can we help those in need of information and assistance with freshwater “safe to swim” water quality?



# Question 6 – What are your safe to swim water quality issues and concerns at a local or site specific level?

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▶ 53 Responses

▶ Topics

▶ Rivers

- ▶ General Concerns
- ▶ Specific Parameters

▶ Lakes

- ▶ General Concerns
- ▶ Specific Parameters

▶ Water Quality Objectives

▶ Parameters

▶ Closures

▶ Special Topics



# Question 6 – What are your safe to swim water quality issues and concerns at a local or site specific level?

General Issues – Rivers	
1	Freshwater Recreational Contact at River Beaches
2	wading/swimming in Bishop Creek and irrigation ditches within the <b>Bishop Reservation</b>
4	Personally I'm interested in information related to the safety of <b>North Coast rivers (Eel, Trinity, Van Duzen, Mad, Salmon and Smith)</b> . Professionally I'm involved with the area in and around <b>Willits and Clear Lake</b> .
5	Wading and swimming areas along the <b>Russian River</b>
6	Health and safety of urban creeks both as habitat, and for students to access for monitoring purposes. Overall watershed health.
7	wading and swimming at <b>Pudding Creek Beach in Fort Bragg</b> , wading and swimming in <b>South Fork Eel River</b> near Myers Flat, <b>Russian River</b> near Cloverdale and Healdsburg.
8	<b>Sacramento River and Putah Creek</b>

Specific Parameter Issues - Rivers	
1	Elevated levels of <b>Bacteria and Nutrients</b> in the Santa Ana River
2	Swimming holes in the Scott River at Jones Beach (FS rec site) has elevated levels of <b>bacteria</b> .
3	In the San Joaquin River (and the Cottonwood Creek tributary near Friant Dam), we have often measured exceedances of <b>FIB</b> . These can & have occurred in and near heavy recreation areas.
4	<b>toxic blue green algae</b> in South Fork Eel River during low flows and hot weather.
5	Monitoring <b>E.coli</b> concentrations at popular freshwater swimming locations in the Los Angeles and San Gabriel Rivers Watersheds to determine potential health impacts to swimmers.
6	<b>pathogen-impaired</b> or suspected impaired water bodies where swimming is common: Bishop Cr. Markleeville Cr.
3	Wading/Swimming Areas on the American River. There are many people that go whitewater rafting and swimming along the American River. Water quality is monitored on a monthly basis for <b>coliform bacteria/e.coli levels</b> . A plan of action is in place if coliform bacteria/e.coli levels are found to be too high.

# Question 6 – What are your safe to swim water quality issues and concerns at a local or site specific level?

General Issues/Concerns - Lakes	
1	few issues/concerns. Lower third of river (reach monitored) physically un-swimmable. Wading also difficult. Physical, chemical and biological limitations.
2	Lake-side swimming beach
3	Lakeside swimming beaches and watershed
4	1. Malibu Lagoon
5	2. Lake Sherwood
6	Clear Lake has 4,000 lakeshore property owners; 63 square miles water surface; 32 public access beaches; 40 - 50 miles of shoreline of the lake, that is a public easement, is useable by the public; up to 75,000 visitors a year. Where does the County start to monitor and for what? <b>Lake County has no "safe to swim" monitoring program.</b>
7	Bridgeport Reservoir, Bridgeport, CA

Specific Parameter Issues/Concerns - Lakes	
1	<b>high bacteria levels</b> at swimming and cove areas along the lake beaches nearby camp/picnic areas
2	We occasionally get involved with posting natural swimming areas if we have incidences of <b>Schistosome dermatitis</b> .
3	<b>Cyanobacteria</b> monitoring/posting for Lake Oroville <b>Pathogen monitoring/reporting/posting</b> for Oroville Facilities designated swim areas
4	Atascadero Lake with high <b>FIB</b> and low <b>Dissolved oxygen</b> Nacimiento Reservoir - <b>high mercury concentrations</b>



# Question 6 – What are your safe to swim water quality issues and concerns at a local or site specific level?

Water Quality Objective Issues/Concerns	
1	<b>HAB's</b> exceeding the CA guidelines for public health
2	<b>Ocean stds</b> Total coliform 10,000/100 mL; Enterococci 104/100mL
3	County level - <b>Ocean water</b> meeting <b>State bacteriological</b> standards for body-contact recreation.
4	Application of <b>rec standards</b> to flood control channels where there is either too little water for swimming, or greater hazards due to high flows during storm events.
5	We use the <b>CDPH "Draft Guidance for Fresh Water Beaches"</b> dated July 24, 2001, for our criteria when analyzing fresh water samples. We sample for <b>Total and fecal coliform or e-coli</b> and use the above guideline for maximum levels allowed. We close the beaches if the water has shown to be in excess of the prescribed levels.
6	We feel that the <b>REC-I</b> standard should not apply to the Watsonville Slough. This water body is not used for any of the listed REC-I uses though the SWRCB suggests that they saw someone fishing once. The uncontrolled blue-green algae growth at Pinto Lake is a much more important body contact water quality issues, though always meets bacterial REC-I

Parameter issues/concerns	
1	<b>microcystis</b> blooms
2	<b>Legacy pesticides (DDT), excess nutrients, microcystin toxicity</b>
3	Poor water quality indicators. I wish there was a better indicator than E.coli. - <b>Swimmer's itch &amp; Blue-green algae.</b> - <b>Stormwater and storm drain runoff</b> - <b>new zealand mudsnails</b> - <b>quagga and zebra mussels</b>
4	<b>Bacteria</b> concentrations in Riverside, San Bernardino, Corona and Anaheim Ca.
5	<b>Nutrients</b> in the Salinas River.
6	<b>bacterial levels, nuisance algae, toxic algae, lack of flow, turbidity</b>
7	I need to evaluate pathogen data from 303d listed sites and near by areas to confirm listing and to write a TMDL. Also, I need to be able to inform the public if particular beaches have pathogen problems are are not safe for swimming.
8	<b>HPC's, Coliforms,</b>

# Question 6 – What are your safe to swim water quality issues and concerns at a local or site specific level?

Lakes and Rivers	
1	AB411 beaches; other beaches; recreational lakes; freshwater swimming holes; lagoon; creeks.
2	lakes, streams, reservoirs used by the public for recreational water activities
3	Water contact recreational resorts with designated swimming areas that do not have a filtration/disinfection system. Fecal coliform is monitored.
4	lake beaches, swimming holes in river, wading in rivers
5	Bacteria/pathogen exposure for swimming in the Russian River and South Fork Eel River. Bacteria/pathogen exposure for kids wading in Santa Rosa Creek. Dog (and human) exposure to BGA and toxins in Spring Lake, Iron Gate and Copco reservoirs, and occasionally Eel River. Kids playing in the stream that enters Gleason Beach (Sonoma Co).
6	Beaches Lakes and Rivers within the City limits
7	Worried about high bacteria levels especially in known swimming spots. Specifically, Malibu Creek State Park Rock Pools, Century Lake, below Rindge Dam in Malibu Creek.

Closures	
1	We believe as an Irrigation District it is important to remind the public that Canals and Drain Ditches are not recreational areas. "No Swimming" signs are posted at all road crossings for this reason.
2	would relate to lost recreational use as a result of a spill-related closure/restrictions

Special Topics	
1	How does water quality testing compare to illnesses?
2	Coastal beach water within the ASBS areas.
3	The Santa Clara River is dry much of the time and the only perennial water is from the two water reclamation plants. There are homeless encampments near the perennial flows from the plants. The tributaries in undeveloped natural areas have flow much of the year which is likely only contacted with hikers. These areas are not conducive to posting.

# Question 7 – What are your safe to swim water quality issues and concerns at a regional level?

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- ▶ 53 responses

- ▶ Topics

- ▶ Sites

- ▶ Multiple watersheds
    - ▶ Regionwide
    - ▶ Estuaries
    - ▶ Rivers

- ▶ Regulations

- ▶ Beneficial Uses
    - ▶ TMDLs
    - ▶ Water Quality Objectives

- ▶ Indicators

- ▶ Methods to be Identified

- ▶ Access to data

- ▶ Pollution Sources



# Question 7 – What are your safe to swim water quality issues and concerns at a regional level?

Specific Area Concerns	
1	Freshwater Recreational Contact at River Beaches
2	Klamath River may be unsafe for swimming at times of the year.
3	June Lakes, Twin Lakes, Bridgeport Reservoir, Topaz Lake, East Walker River, West Walker River.
4	San Francisco Bay Estuary (including the Delta)
5	I think for the SJR as a whole. Not much WQ info from a human health aspect despite the SJR Restoration program.
6	Multiple Watersheds
7	Multiple watersheds
8	multiple watersheds at regional level under responsibility of RWQCB (R9)
9	increasing or changing pathogen levels in watersheds and waterboard region
10	waterboard region with multiple watersheds
11	Multiple Watersheds - Water from Hangtown Creek entering the American River watershed; Coordinate with other water quality agencies when needed at Lake Tahoe. Examples include: accidental discharges of contaminants into the waters of Lake Tahoe from boats, etc.
12	Waterboard region
13	waterboard Region 8 and 9 (Riverside San Bernardino and Orange County)
14	Waterboard Region (CCLEAN)
15	We are concerned about high bacteria levels at a watershed scale as well as at the scale of the Santa Monica Mountains - multiple watersheds.
16	Are surface water recreational areas safe for residents and visitors.
17	In Central CA. Runs the gambit from Nutrients to metals (including mercury), pesticides, other trace contaminants.
18	We only have regulatory authority within the Reservation boundaries
19	We have jurisdiction of a Water Board region (region 2). At a regional level, we need to know what waterbodies have problems so they can be addressed.
20	Southern California Bight versus local regions or state.  Large scale versus local influences on HABs- why and when they occur. What are drivers of HABs?- increased nutrients, warmer water temperatures, increased stratification, etc.

# Question 7 – What are your safe to swim water quality issues and concerns at a regional level?

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Regulations/TMDLs/Water Quality Objectives	
1	regulatory issues
2	The Regional Water Quality Control Board should understand that <b>Beneficial uses</b> of the water in an Irrigation District are for Agricultural Irrigation use only. All other Beneficial uses are non-existent within the Irrigation System.
3	Use of appropriate <b>water quality objectives</b> , risk analysis-wise, for recreational use in generally pristine waters of the eastern Sierra Nevada mountains.
4	Do E.coli levels exceed <b>WQOs</b> described in the Region 4 Basin Plan
5	<b>TMDLS</b> for construction
6	bacteria <b>TMDL</b> compliance
7	<b>TMDL</b> for fecal coliform for Watsonville Slough. We want it changed to be a LREC-I infrequently used bacterial standard of 576 MPN/100 mL for E. coli. This is already implemented in Regions 2 and 9.



# Question 7 – What are your safe to swim water quality issues and concerns at a regional level?

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Indicators/Methods to be Identified	
1	No established backgrounds and research for freshwater rivers with low flows leading to inconsistent and unreliable sampling results.
2	Need test results day of sampling
3	Waterboards need to complete development of standardized methodology for monitoring cyanobacteria. The draft guidance needs to be finalized with established methods for compliance
4	The use of fecal coliform should be replaced with E.coli for both rec-1 and rec-2 to same money and speed analysis.

Parameters	
1	How do our tests compare with other coastal areas?
2	Illegal sewage waste discharges into watersheds affecting ocean water quality.
3	FIB Pesticides
4	Microcystin toxicity and excess nutrients in waterways



# Question 8 – What are your safe to swim water quality issues and concerns on a statewide basis?

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- ▶ 68 responses
- ▶ **Topics**
  - ▶ Standards
    - ▶ TMDLs
    - ▶ Water Quality Objectives
  - ▶ Areas of Concern
  - ▶ Indicators
  - ▶ Blue-Green Algae
  - ▶ Funding Issues
  - ▶ Pollution Sources



# Question 8 – What are your safe to swim water quality issues and concerns on a statewide basis?

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Standards/TMDLs/Water Quality Objectives	
1	Imposed <b>TMDLS</b>
2	The proposed state-wide <b>indicator bacteria objectives</b> may not be protective enough, risk-wise, for high recreational use waters.
3	Do E.coli levels exceed state mandated <b>WQOs</b>
	Meeting the current standards during storms is not feasible. An alternate wet weather standard, or new indicators will be more practical than treatment BMPs for coliforms.
4	In dry weather the flow can be a trickle. Less than three inches deep should not be considered swimmable and a different standard applied because the risk of ingestion is less.

Areas of Concern	
1	Maintaining swimming/recreational areas to reduce the risk of disease to the public using these areas.
2	multiple watersheds throughout state
3	From Big Sur to Marin County
4	It seems that the state has a habit of listing the entire water body. It could be more beneficial to evaluate the water bodies and their <b>beneficial uses</b> on a smaller scale (by section/reach of river or slough).

## Question 8 – What are your safe to swim water quality issues and concerns on a statewide basis?

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Indicators	
1	Bacteria standard consistency for E.coli
2	Freshwater and ocean beach water contact recreation and impacts from bacteria, pathogens, and BGA.
3	Nutrient loading, high TDS, Bacteria
4	lack of flow.
5	Background levels of bacteria are given little concern with limited statewide reference sites. Any time background is brought up the state believe permit holders are just trying to get out of something, when these issues are largely beyond the control of the permit holders.

Blue/green algae/HABs/microcystin	
1	microcystis
2	Mainly bacteria and nutrients that cause algal blooms.
3	Cyanobacteria
4	Blue-green algal toxins
5	Harmful Algae blooms (HABs)
6	The SWRCB is providing no guidelines for HAB monitoring.
7	See above plus communicating effectively throughout the state on HABs.
8	HPC, Coliforms, HAB



# Question 8 – What are your safe to swim water quality issues and concerns on a statewide basis?

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Funding Issues	
1	Lack of program funding and standards for the freshwater river beach programs
2	How do we compare with other counties and how can we get more funding to do more testing?
3	The inability of the State to provide the adequate funding levels and resources needed to fully implement the regulatory mandated monitoring programs required under State statutes and regulations.

Pollution Sources	
1	Maybe targeting heavy recreation areas? Examining the relative roles of septics, livestock, etc. towards WQ impairment.
2	We are worried about inputs of bacteria to creeks and the ocean from stormwater and urban runoff.
3	Sewage release, bacte levels



## Questions 9-11

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- ▶ Who is informing the public about freshwater “safe to swim” water quality and how?



**Question 9** – Does your agency or organization inform the public about water quality for swimming safety in surface waters (not swimming pools)?

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Answer	# of Responses	Response Ratio (%)
Yes	32	60.3
No	21	39.6
Total Responses	53	100



## Question 10 – If yes to Question 9, please tell us how you share this information with the public?

Answer	# of Responses	Response Ratio (%)
Onsite Posting	18	21.7
Newspaper	8	9.6
Web-based (if web-posted)	12	14.4
No Responses	23	27.7
Other	21	25.3
Total Responses	83	100

Other	
1	Unsure
2	general media release
3	A few seminars
4	TMDLs, Enforcement actions
5	publicly available data
6	Work with local watershed groups, request County Health to post if appropriate
7	Report issues to County Public Health
8	on a question/answer basis
9	Monthly report for Lake Sherwood
10	Annual monitoring reports and 5-year State of the Watershed reports

# Question 11 – If “web-based” was chosen for Question 10, please share the URL(s)?

Answer	
1	<a href="http://www.waterboards.ca.gov/northcoast/water_issues/programs/water_quality_monitoring/2013/130726_rr_src_data.pdf">http://www.waterboards.ca.gov/northcoast/water_issues/programs/water_quality_monitoring/2013/130726_rr_src_data.pdf</a>
2	<a href="http://WWW.QVIR.com">http://WWW.QVIR.com</a> see Environmental Program
3	<a href="http://www.water.ca.gov/bdma/">http://www.water.ca.gov/bdma/</a> <a href="http://www.water.ca.gov/ssr/microcystis.cfm">http://www.water.ca.gov/ssr/microcystis.cfm</a>
4	<a href="http://www.waterboards.ca.gov/centralcoast/">http://www.waterboards.ca.gov/centralcoast/</a>
5	<a href="http://www.ebparks.org/activities/swimming">http://www.ebparks.org/activities/swimming</a> <a href="http://www.ebparks.org/stewardship/water">http://www.ebparks.org/stewardship/water</a>
6	<a href="http://gis.co.santa-cruz.ca.us/PublicWaterQuality/">http://gis.co.santa-cruz.ca.us/PublicWaterQuality/</a>
7	<a href="http://www.sloPublicHealth.org/ehs">http://www.sloPublicHealth.org/ehs</a>
8	<a href="http://sceh.com/Home/Programs/EnvironmentalWaterQualityProgram/CurrentWaterQualityInformation.aspx">http://sceh.com/Home/Programs/EnvironmentalWaterQualityProgram/CurrentWaterQualityInformation.aspx</a>
9	<a href="http://streamteam.healthebay.org/">http://streamteam.healthebay.org/</a> <a href="http://brc.healthebay.org/">http://brc.healthebay.org/</a>
10	<a href="http://theswimguide.org">theswimguide.org</a>
11	<a href="http://www.ocbeachinfo.com">http://www.ocbeachinfo.com</a>
12	<a href="http://svr.cd.org/wordpress/">http://svr.cd.org/wordpress/</a>
13	<a href="http://www.bishoptribeemo.com/Water/index_water.htm">http://www.bishoptribeemo.com/Water/index_water.htm</a> check the Monitoring tab
14	<a href="http://www.waterboards.ca.gov/northcoast">www.waterboards.ca.gov/northcoast</a>
15	<a href="http://www.co.lake.ca.us/Government/Directory/Environmental_Health/Blue-Green_Algae.htm">http://www.co.lake.ca.us/Government/Directory/Environmental_Health/Blue-Green_Algae.htm</a>
16	<a href="http://sfkingsriver.org">http://sfkingsriver.org</a> <a href="https://www.facebook.com/photo.php?fbid=512821192132199&amp;set=a.296393263774994.71256.227624743985180&amp;type=1&amp;theater">https://www.facebook.com/photo.php?fbid=512821192132199&amp;set=a.296393263774994.71256.227624743985180&amp;type=1&amp;theater</a>
17	<a href="http://www.mywaterquality.ca.gov/safe_to_swim/">http://www.mywaterquality.ca.gov/safe_to_swim/</a> Also pathogen data should be in CEDEN if collected by SWAMP or Water Board staff.
18	<a href="http://www.sccoos.org/data/habs/index.php">http://www.sccoos.org/data/habs/index.php</a> <a href="http://www.sccoos.org/data/habs/news.php">http://www.sccoos.org/data/habs/news.php</a> <a href="http://habmap.info/">http://habmap.info/</a>



## Questions 12-14

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- ▶ Who is generating freshwater “safe to swim” water quality data?
- ▶ Who is using another organization’s “safe to swim” water quality data for their own assessments?



## Question 12 – Whose data do you use for your assessments and/or “beach” postings?

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Answer	# of Responses	Response Ratio (%)
Own Organization's	41	77.3
Other organization's	25	47.2
Total Participants	53	100

Type of Organization	Uses Own data	Uses Other's data
City	3	4
County	13	5
Water Purveyors	1	1
Joint Powers Authority	1	1
State	14	7
Federal	1	1
Tribal	2	1
NGO	6	4



# Question 13 – If “Other” was chosen in Question 12, please share with us the name of your organization(s) whose data your program uses?

Answer	
1	Sonoma County Public Health Dept.
2	USGS Streamflow
3	Comprehensive Monitoring Program for agricultural runoff
4	County of Santa Cruz
5	Operators use independent labs to test water samples at their expense, then submit data to our department.
6	NPDES dischargers (Publicly Owned Treatment Works)
7	Orange County
8	Applied Marine Sciences, Monterey Bay National Marine Sanctuary Foundation via Monterey Bay Analytical Services
9	- Orange County Sanitation District
	- Orange County Public Works/Watersheds
9	- South Orange County Wastse Water Authority
10	RWQ, DFW, USFWS, Karuk Tribe, Yurok Tribe,
11	Orange County
12	Ventura County Environmental Health preforms reports on beach water quality.
13	LA County and Ventura County (we have no beaches within an hour drive of City limits so doesn't really apply to us)
14	SWRCB grant funded research on Clear Lake when funded, currently this is not funded.
15	Cal DWP
16	I believe it is Beach Watch related and includes East Bay Regional Parks and County public health collected data.
17	CDHP, SWRCB
18	CDPH 2001 Freshwater Draft Guidelines for analyzing test results.
	Sampling done and analyzed San Joaquin County Public Healh Lab for one beach; the other is sampled and analyzed by City of Lodi White Slough Lab.
19	We have not had a beach posting since I have worked for Yolo County but I would think that if the State or Sacramento County did a posting for the Sacramento River, we would also issue the same posting.
20	Mendocino and Humboldt County Env. Health
21	California State University at Monterey Bay

# Question 14 – How do you access the data used by your organization? (check all that apply)

Answer	# of responses	rating score (%)
Program database (offline)	25	36.7
Internet database	21	30.8
internet other	11	16.1
intranet database	5	7.3
Email	29	42.6
Spreadsheet	25	36.7
CD/Digital copies of data	8	11.7
Paper copy of data	19	27.9
Other	9	13.2
Total	68	100

	Other
1	Upload to CDEC and CEDEN for Willits data by October 2013.
2	CEDEN

## Questions 15-16

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- ▶ What parameters are programs monitoring for?



# Question 15- Does your monitoring program currently monitor for these safe to swim related water quality parameters?

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65 Responses

Answer	Yes	No
Enterococcus	40%	60%
Total coliform	60%	40%
Fecal coliform	44%	55%
E. coli	58%	41%
Bacteroides	18%	81%
Giardia	9%	90%
Blue green algae / Microcystin	30%	69%
Other (State your other parameters within "Comment")	24%	75%



Question 15 – Does your monitoring program currently monitor for these safe to swim related water quality parameters? Answer: “Other”

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	Other
1	We are interested in how interim water releases as part of the SJR Restoration program might affect FIB levels. Also the effects of the 'first flush' rainfall early in the water year.
2	General chemistry (temp, pH, DO, conductivity), nutrients, toxicity
3	Willits monitoring according to Order R1-2010-0066. Clear Lake Nutrient TMDL monitoring program is being used to determine phosphorus loading to the lake.
4	We do not have a monitoring program
5	We have two major interagency contracts for microbial source tracking, both of which will use bacteroides PCR methods, among others.
6	FIB
7	Temp, pH, SpCond, Turb and ODO



# Question 16 – Have your previous monitoring programs monitored for these safe to swim related water quality parameters?

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65 Responses

Answer	Yes	No
Enterococcus	40%	60%
Total coliform	56%	43%
Fecal coliform	49%	50%
E. coli	55%	44%
Bacteroides	16%	83%
Giardia	15%	84%
Blue green algae / Microcystin	27%	72%
Other (State your other parameters within "Comment")	16%	83%



## Question 16 – Have your previous monitoring programs monitored for these safe to swim related water quality parameters?

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	Other
1	Caltrans has and continues to do a lot of monitoring; I only listed monitoring programs that I'm personally involved in.
2	We have never had a monitoring program that I am aware of.
3	FIB
4	There really aren't any "swimming" areas in the upper Santa Clara River.
5	-Current HAB program only monitors for HAB species along the coast, so only marine. -SCCOOS has displayed state water quality data in the past but currently isn't doing this.
6	no previous program. We have been doing the same monitoring for about 13 years



## Question 17

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- ▶ What drives freshwater “safe to swim” monitoring?



# Question 17 – What are your program's safe to swim water quality monitoring interests and/or requirements?

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63 Responses

Answer	Yes	No	NA
NPDES	50%	9%	39%
Stormwater	55%	14%	30%
TMDL	55%	9%	34%
County Ordinance	25%	9%	65%
Ambient monitoring	65%	1%	33%
Grant activity	36%	9%	53%
Source Water Protection	50%	9%	39%
Other (Please explain in comments)	15%	0%	84%



# Question 17: What are your program's safe to swim water quality monitoring interests and/or requirements? "Other"

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	Other
1	Irrigated agriculture runoff
2	Interests: Public Health and safety for the community
3	Focus on pathogen-impaired (303d listed) water bodies and water quality investigations of potentially impaired water bodies.
4	ASBS Area of Special Biological Significance
5	main focus on agricultural water quality impacts on cold water fish. TMDL didn't identify human issues of concern.
6	Tribal Water Quality Standards
7	Weekly bacteria monitoring is also done by Ventura County in the Malibu Creek watershed under a bacteria TMDL
8	Basic recreational public health. No current regulatory requirements apply.



## Questions 18-19

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- ▶ How is “safe to swim” water quality data being shared?



## Question 18 – How do you share, or submit your safe to swim water quality data with others? (check all that apply)

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	# of Responses	Response Ratio (%)
CIWQS Database	2	3.7
SWAMP	13	24.5
CEDEN	14	26.4
Via Smartphone App	0	0
Website	17	32.0
Other	31	58.4



## Question 18 – How do you share, or submit your safe to swim water quality data with others? (check all that apply)

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Other	
1	direct
2	Submit monitoring reports to the appropriate Regional Board
3	Public calls for information as needed.
4	Email
5	email spreadsheets
6	SCCWRP
7	State/SCCWRP database
8	reports
9	SWAMP Compatable
10	Tribal Newsletter
11	Newsletter
12	general media release; data is available for specific research on request
13	list serve
14	AB411 Database



## Question 19 – If you share or submit your safe to swim water quality data on a website, what is/are the URL(s)?

Answer	
1	<a href="http://www.waterboards.ca.gov/northcoast/water_issues/programs/water_quality_monitoring/2013/130726_rr_src_data.pdf">http://www.waterboards.ca.gov/northcoast/water_issues/programs/water_quality_monitoring/2013/130726_rr_src_data.pdf</a>
2	<a href="http://www.qvir.com">http://www.qvir.com</a>
3	<a href="http://www.water.ca.gov/ssr/microcystis.cfm">http://www.water.ca.gov/ssr/microcystis.cfm</a> <a href="http://brc.healthebay.org/?st=CA&amp;f=l">http://brc.healthebay.org/?st=CA&amp;f=l</a>
4	<a href="http://www.cabeachwatch.org/">http://www.cabeachwatch.org/</a>
5	<a href="http://www.kbmp.net">www.kbmp.net</a>
6	<a href="http://streamteam.healthebay.org/">http://streamteam.healthebay.org/</a> <a href="http://ca.water.usgs.gov/">http://ca.water.usgs.gov/</a>
7	<a href="http://ca.water.usgs.gov/data/">http://ca.water.usgs.gov/data/</a> <a href="http://www.ocbeachinfo.com/data">http://www.ocbeachinfo.com/data</a>
8	<a href="http://www.swrcb.ca.gov/water_issues/programs/beaches/beach_water_quality/index.shtml">http://www.swrcb.ca.gov/water_issues/programs/beaches/beach_water_quality/index.shtml</a>
9	<a href="http://www.bishoptribeemo.com/Water/index_water.htm">http://www.bishoptribeemo.com/Water/index_water.htm</a>
10	<a href="http://www.waterboards.ca.gov/northcoast">www.waterboards.ca.gov/northcoast</a>
11	<a href="http://www.edcgov.us/Government/EMD/HazardousMaterials/Storm_Water_Pollution_Prevention.aspx">http://www.edcgov.us/Government/EMD/HazardousMaterials/Storm_Water_Pollution_Prevention.aspx</a>
12	<a href="http://www.vcstormwater.org/NPDES_WQ/">http://www.vcstormwater.org/NPDES_WQ/</a>
13	<a href="http://www.cdm.org/biosite/view-data.asp">http://www.cdm.org/biosite/view-data.asp</a> <a href="http://bridgeportindiancolony-env.com/Water.html">http://bridgeportindiancolony-env.com/Water.html</a>
14	<a href="https://www.facebook.com/pages/Bridgeport-Indian-Colony-Environmental-Department/403842836357155">https://www.facebook.com/pages/Bridgeport-Indian-Colony-Environmental-Department/403842836357155</a> <a href="http://www.sccoos.org/data/habs/index.php">http://www.sccoos.org/data/habs/index.php</a>
15	<a href="http://habmap.info/">http://habmap.info/</a>

# Confusing Issues

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- ▶ **Ambient and pollution source monitoring:**
  - ▶ Organizations are monitoring for non - 'safe to swim' fresh water quality parameters (Potential pollution drivers and microbial source tracking).
    - ▶ How can we assist organization programs and inform the public on these issues?
- ▶ **Blue-green algae (Microcystin/Harmful Algal Blooms)**
  - ▶ Possibly work with the blue-green algae working group to add to the web portal
- ▶ **Beneficial Uses and Water Quality Objectives**
  - ▶ Application of REC-1 and REC-2 to certain waters
  - ▶ Ocean waters affected by potential inland pollution sources



# Wrap-Up

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- ▶ **Discussion**
  - ▶ Identify follow up tasks
- ▶ **Schedule follow-up meeting(s)**
  - ▶ Sub-working group
  - ▶ Working group



